This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A Cartesian loop transmitter having a forward path and a feedback path, each of these paths comprising an I-channel and a Q-channel, as well as an isolator eliminator, said transmitter comprising:

a) a first low pass filter and a first wide band pass filter connected to said I-channel at LP2;

b) a second low pass filter and a second wide band pass filter connected to said Q-channel at LP2;

c) a first root mean square detector collecting signals from said first wide band pass filter and from said second wide band pass filter;

d) a second root mean square detector collecting signals from said first low pass filter and from said second low pass filter;

e) a first divider connected to said first and said second root mean square detectors to produce a first ratio using signals from said first and said second root mean square detectors; and

f) a means for comparing connected to said first divider, the means for comparing comparing the first ratio to a first threshold, the means for comparing providing a signal; and ~~to~~

g) a digital system connected to input attenuators on said I- and Q-channels and to the means for comparing, the digital system controlling an attenuation setting of the transmitter based on the signal from the means for comparing.

2. (Currently Amended) The Cartesian loop transmitter according to claim 1 further comprising:

a) a first narrow band pass filter connected to said I-channel at LP2;

b) a second narrow band pass filter connected to said Q-channel at LP2;

c) a third root mean square detector collecting signals from said first narrow band pass filter and from said second narrow band pass filter; and

d) a second divider connected to said second and said third root mean square detectors and to said means for comparing, the second divider producing a second ratio using signals from

said second and third second root mean square detectors, the means for comparing comparing the second ratio to a second threshold.

3. (Currently Amended) The Cartesian loop transmitter according to claim 1 wherein a memory storing the attenuation setting is connected to said digital system.

4. (Currently Amended) The Cartesian loop transmitter according to claim 1 wherein a generator generating a small signal at a predefined frequency offset in relation to a transmission channel of the transmitter is connected to said digital system.

5. (Original) The Cartesian loop transmitter according to claim 4 wherein said generator is a sine wave generator.

6. (Withdrawn - Currently Amended) A method of adjusting an output level of a Cartesian loop transmitter in a digital radio system, the method comprising the steps of:

a) generating a small signal at a predefined frequency offset in relation to a transmission channel;

b) applying a factory predefined attenuation setting for adjusting said output level if an attenuation setting for a previous slot is not available, or

c) applying said attenuation setting obtained in previous slot for adjusting said output level in a current slot;

d) measuring an on-channel baseband signal level at LP2;

e) measuring ~~said~~ a small signal level of said small signal at a predefined frequency offset at LP2;

f) calculating a first ratio of said small signal level to said on-channel baseband signal level; and

g) increasing an attenuation setting of an input signal if said first ratio is above a first threshold; and

h) storing said attenuation setting of an input signal in a memory.

7. (Previously Presented) The method according to claim 6 wherein said small signal level is measured after filtering in a wide band pass filter.

8. (Previously Presented) The method according to claim 6 wherein said on-channel signal level is measured after filtering in a low pass filter.

9. (Previously Presented) The method according to claim 6 further comprising steps:

e1) measuring said small signal level after filtering in a narrow band pass filter at said predefined frequency offset at LP2;

f1) calculating a second ratio of said small signal level after filtering in said narrow band pass filter to said on-channel baseband signal level; and

g1) reducing said attenuation setting of an input signal if said second ratio is below a second threshold.

10. (Withdrawn - Currently Amended) The method according to claim ~~6~~ 9 wherein steps d) through h) are repeated in a loop while said first ratio and said second ratio are between said first and said second thresholds and while there is a modulated signal to transmit.

11. (Withdrawn - Currently Amended) The method according to claim ~~6~~ 9 wherein for determining at least one of said first or said second ratio, root mean square values of said on-channel baseband signal level and ~~a root mean square of~~ said small signal level are taken.

12. (Withdrawn - Currently Amended) The method according to claim ~~6~~ 9 wherein after increasing said attenuation setting, ~~a first delay is applied to~~ execution of software is delayed by a first delay, ~~which based on next samples, the~~ software calculating ~~calculates~~ said first and said second ratio and ~~increases~~ increasing said attenuation setting based on next samples.

13. (Withdrawn - Currently Amended) The method according to claim ~~6~~ 9 wherein after reducing said attenuation setting, ~~a second delay is applied to~~ execution of software is delayed by a second delay, ~~which based on next samples, calculates~~ the software calculating said first and said second ratio and ~~reduces~~ reducing said attenuation setting based on next samples.

14. (Withdrawn - Previously Presented) The method according to claim 6 wherein said small signal is generated on a level significantly below said on-channel signal level.

15. (Previously Presented) The transmitter according to claim 1 wherein the transmitter is operable to provide communications in at least one of the following communication systems: TETRA, GSM, and IDEN.

16. (Cancelled)

17. (Cancelled)

18. (New) The transmitter according to claim 1 further comprising attenuators in each of the I- and Q-channel paths, the digital system connected to the attenuators such that the attenuation setting is applied to the attenuators by the digital system.

19. (New) The transmitter according to claim 1 wherein the attenuation is increased if the first ratio is larger than the first threshold.

20. (New) The transmitter according to claim 2 wherein the attenuation is decreased if the second ratio is less than the second threshold.

21. (New) The transmitter according to claim 2 wherein after changing the attenuation setting, the digital system delays calculating the first and second ratios based on next samples by amounts dependent on whether the attenuation setting is increased or decreased.